Ben Schroeder Saddle Tree Company
Madison
Jefferson County
Indiana

Photographs and
Written and Historical data
REDUCED COPIES OF MEASURED DRAWINGS

Historic American Engineering Record
National Park Service
Department of Interior
Washington, D.C. 20240

HISTORIC AMERICAN ENGINEERING RECORD

Ben Schroeder Saddle Tree Company Factory

HAER IN-26

Location:	106 Milton Street; North side of Milton Street, 150 feet west of Jefferson Street, Madison. UTM: 16.640990.4289060 Quad: Madison, West
Date of Construction:	c.1876
Significance:	Established in 1878, the Ben Schroeder Saddle Tree Company was a family-run enterprise which manufactured wooden saddle trees, the forms that create the spine for a finished saddle. The shop, which reflected the handicraft nature of the manufacturing process, was closed when the last family member died in 1972. The abandonment of the shop coincides with the death of an industry, for the Ben Schroeder Company was the last firm to manufacture wooden saddle trees in the U.S.
Historian:	Alex Gratiot

History of the Ben Schroeder Saddle Tree Company

Joseph Schroeder, the last active saddle tree maker in Madison, Indiana, died in 1972 at the age of seventy-six. Since then the property where his family manufactured saddle trees for the previous ninety-five years has remained abandoned. Concerned about the future of the factory, members of Historic Madison Incorporated agreed to co-sponsor (with the Federal Government)a survey of the site, which was recorded by the Historic American Engineering Record (HAER). In the summer of 1974 a HAER team spent a week in Madison collecting data. Alex Gratiot, historian for the survey team, compiled the following report.

The Schroeder Family

John Benedict Schroeder (1844-1908), usually referred to as Ben, moved to Madison sometime after the 1870 census and before the 1875 directory was compiled. At this time he was listed as a boarder in the William Tell House. Although he was called a saddle tree maker, his name did not appear on the separate list of saddle tree makers, which creates some ambiguity regarding his occupational status at that time. Because he was then thirty-two years old, it is not likely that he was just learning the craft, although it is possible. He could have been working for other saddle tree makers, or perhaps his place of work was simply not listed.[1] In 1878, Ben Schroeder purchased the site of the present house and shop buildings from the widow Ann Hendricks for $225.[2]

Ben Schroeder and his wife, Elizabeth or Lizzie (1858-1919), had seven children: Charles, John, Joseph, Leo, Gertrude, Pauline, and Rose. After Ben died in 1908, his son Leo managed the shop. When Leo retired after World War I, the works were sold for $1 to the newly-formed Ben Schroeder Saddle Tree Company, which consisted of all the brothers and sisters except Rose.

The Schroeders and Madison

William Wesley Woollen describes Madison in his Biographical and Historical Sketches of Early Indiana as having

> ...daily lines of steam packets to Cinciannati and to Louisville, and a regular one to Frankfort. Her wharfs were covered with hogsheads of sugar and molasses from New Orleans, and with boxes and bales of merchandise from the Atlantic slope. Her streets were crowded with men who came to buy her merchandise and her manufactured goods. Her citizens were jostled on the sidewalks by strangers who came hither to view her greatness, or to enter Indiana through her portals. Such was Madison from 1844 to 1852, when the zenith of her prosperity was reached.[3]

Madison was the second oldest city in the state, and until 1856 had been the second largest. However, the expanding railroad system in

Indiana bypassed Madison and the railroad's popularity rapidly diminished the importance of the Ohio River as a major transportation artery. When Ben Schroeder moved to the city in the 1870's, Madison was no longer a boom town, a gateway to Indiana, or an expanding city on the Ohio River.

In 1879, one observer listed Madison's major industries in this order: starch, saddle trees, furniture, and steam engines.[4] Beginning in the late 1850's and continuing through the end of the nineteenth century there were always four to six separate saddle tree firms in the city.[5] It is interesting to note that the manufacture of saddle trees in Madison was carried on solely by individuals of German descent. A large influx of Germans to Madison began in the early 1850's, and Ben Schroeder arrived at the end of this movement.[6]

The manufacture of saddle trees was always a craft operation. Not only did it not become highly mechanized, but also the number of employees in each shop was never very large. For example, it is doubtful that the Schroeders ever employed more than ten people at one time in their shop.[7] In contrast, the starch, furniture, and steam engine industries in Madison were highly industrialized and employed large numbers of people.

The Schroeders were not highly social people and their isolation from the Madison community was intensified during World War I. They were selling saddle trees to Cuba, and everyone knew that these trees were going directly to Germany. The Schroeders were warned to stop selling to Cuba, but, as Joe Schroeder said, "By God we didn't quit, and by God they burned us out."[8] The Schroeders' eagerness to make money apparently outweighed their nationalistic feelings.

The Saddle Tree

Because a horse cannot support a great deal of weight on its backbone, the saddle tree functions to distribute that weight onto the animal's sides. The saddle tree consists of two "sidebars" that are connected over the backbone of the horse by two "forks," one linking the front ends of the side bars, the other joining the rear ends. The fit of the tree is extremely important. Just as a wrong size shoe will cause blisters, so will an improperly fitted saddle tree create sores. The side bars, for example, must conform to the horse's shape, which is narrower at the withers than at the barrel. Consequently, the side bars seem to twist to match this shape. The forks must be high enough so that they do not touch the horse's backbone.

The bars holding the stirrup straps are usually placed on the side bars close to, or at the junction with, the front fork. The rider does not merely sit in the saddle, but also uses it as a platform for a variety of activities, such as standing in the stirrups. Because the front fork must be sturdy enough to support weight in the stirrups, a steel or iron strap is placed under the pommel. Working saddles, such as the American "Western" saddle, are much heavier than the "Eastern" pleasure riding saddle. The rope used in lassoing is tied to the saddle horn, which is screwed to the front fork. After an animal is lassoed and attached to the saddle horn, the impact from

stopping its forward motion is tremendous. Therefore, both the front fork and its junction with the side bars have to be extremely strong.

The majority of the Schroeder saddle trees were manufactured for Western or Stock saddles. The McClellan saddle, which was simple, cheap, and comfortable, was made for the army. The Schroeders also produced English saddle trees, side-saddle trees, and racing saddle trees.[9]

The Schroeders sold to large saddlery companies scattered all over the United States, rather than to individuals.[10] These companies added the leather and padding, thus covering the wooden saddle tree. In 1890 the Schroeders made approximately 11,500 saddle trees.[11] By the late 1870's the Schroeders were sending saddle trees as far as New Orleans, Burlington, Iowa, Chicago, Philadelphia, and Savannah, Georgia.[12] One index of manufacturers from 1888 indicates that there were only twenty-three saddle tree manufacturers in the U.S. and that only four cities--Madison, Cincinnati, St. Louis, and Newark--had more than one.[13]

The Process of Constructing a Saddle Tree

The Schroeders owned their own forests where they obtained wood that they sawed, stacked, and dried at the factory. The all-important animal glue was probably secured locally (a product of Madison's packing industry).

On a typical Western saddle the forks and side bars were prepared separately. The front forks were formed from two rectangular blocks of wood glued at approximately forty-five degree angles. Rough shaping was done on the band saw. Additional shaping was done with the "frizzer," a spinning, toothed cylinder.[14] Two pattern copying machines had been used to shape the front forks, but these had been abandoned for some time when work at the factory stopped.[15] The rear forks were probably made in a similar manner, although this is not entirely clear.[16] Each side bar was made of a single piece of wood. The twist, (described above) was created by using jigs and a table disk saw. Two machines which the Schroeders built themselves may have also accomplished the same task.[17] The roughly-formed side bars and forks were then taken to the gluing room, where they were assembled. Final shaping was done with draw blades and spoke shaves.[18]

The trees were always covered. In fact, most of the saddle tree was hidden beneath the leather covering. Only two small parts of the tree were visible on the finished saddle--the two iron or steel bars that held the stirrup straps. The covering used on all English trees, side-saddle trees, and the less expensive Western trees was linen, "scrim", or canvas applied with a mixture of red lead and animal glue. The best heavy stock saddles were covered with hog or beef skin. The skin was soaked, stretched wet, and stitched on the tree. When it hardened, the skin strengthened the tree. Although the Schroeders made all of the canvas or scrim coverings themselves, the skin coverings were frequently made by women in Madison who did not work at the shop.[19]

Finally, the tree was ironed with straps made by Charlie Schroeder in the blacksmith shop.[20] Although the above description generally pertains to the order of operations for a Western saddle tree, there were variations for other types of saddles. For example, on English

saddle trees, the side bars were neatly tennoned into the front forks.

Many of the machines that dominate the woodworking shop are typical woodworking machines, such as the power feed rip saw, the planer, the suspended disk saw and the sawmill. The only machine in the shop that eliminated the need for the human mind and eye was the pattern copying macnine, which was not even used. The level of mechanization in the shop was never high. Paper patterns determined the shape of each piece of wood and a person was needed to determine each cut.[21]

When one examines the contents of the shop, it becomes evident that Joseph Schroeder was a frugal man. Small chips saved from the first shaving operations were glued together into blocks large enough to be re-shaped into front or rear forks.[22] After World War II, Schroeder purchased two machines for making clothespins from wooden scraps: one macnine turned the round peg, while the other cut the slit.[23]

Buildings and Power Sources

The construction dates of the older buildings remain obscure. Ben Schroeder probably constructed the original brick shops sometime after 1878 when he purchased the land. The fire during World War I (described above) left scars on the present woodworking shop and on the one old lathe, thus indicating that they are at least pre-1918.[24] The portion of the house nearest the road, as well as the gluing and ironing shops, probably date from the nineteenth century, although there is no evidence to prove that. The sawmill and the second story of the woodworking shop were both built in the 1930's.[25]

Steam seems to have been the first power source used at the factory. A horse turnstile might have been used earlier, or the factory may have been powered by water as it is situated by a stream. The brick boiler house was standing before the present 40 hp boiler was installed in 1924, but it is not known exactly how much older the house is.[26] The nine steam engines scattered about the premises were probably collected over a long period of time. The engine room contains the two largest engines. A partly dismantled engine is next to the boiler, in addition to a steam engine that powers the feed pump. In the sawmill is a twin cylinder marine engine with reversing gear. The four remaining engines, located in the second story of the woodworking shop, are much smaller. The smallest ones were made by Joe Schroeder who, according to one neighbor, was the mechanical mind of the family.[27] All the machines were originally directly connected to the steam engine with a system of belts and lineshafts.

The 35 hp "Primm" diesel engine was obtained second-hand in the 1940's, but instead of being attached to the old lineshafting system, it was used with a generator, which powered electric motors that ran each machine individually. Due to alterations made at that time, it has not been possible to reconstruct the original lineshafting system.[28] For a number of years the steam and diesel systems were used together. At the beginning of the day the diesel engine was used. A vacuum collection system deposited shavings from the shaping machines into a bin that fed into the boiler. When the diesel engine was turned off, the steam engine, used to power the generator until the shavings were gone, was turned on again.[29]

Every few years the "Primm" engine would break down, as indicated

by the flurry of correspondence between the Schroeders and a Mr. Linton of the Power Manufacturing Company, who made the engine. Mr. Linton retired around 1956 and seemed surprised that the engine was still running at that time. However, it became increasingly more difficult to repair the engine. The last letter was in 1969 from the president of the company, who was then over seventy years old. He reported that Mr. Linton was in a nursing home and could no longer repair the machine.

Conclusion

The Schroeder Saddle Tree Company is significant as a survivor of a late nineteenth-early twentieth century single family manufacturing enterprise. Because the company produced a unique product, requiring specially-constructed machinery, the Schroeder Saddle Tree Company can be regarded as a "craft industry." Although they had not been operating for some time, in 1974 the company shops were completely intact with saddle parts in various stages of completion.

With the death of the last Schroeder--Joseph--in 1972, this particular industry is now defunct in the United States. Now that saddle trees are made of fiber glass and steel, the Schroeders were probably one of the last companies to produce wooden saddle trees in this country.

Inventory

Inventory of the major machinery in the Ben Schroeder Saddle Tree Company shops, made by Alex Gratiot in July 1974. Although this inventory undoubtedly omits a great deal, particularly in the area of samller items and hand tools, it is intended to provide the reader with a general idea of the contents of the shops.

Boiler Room

1. boiler (1924) "C.J. Walton & Son, Louisville, Ky."
2. force feed pump
3. steam engine for force feed pump "Rivals No. 3"
4. grinding wheel with wooden base
5. hopper for vacuum sawdust collection system
6. steam engine bed

Machine Shop, East Side

7. band saw "Fay & Egan Co./Cincinnati O." wooden guard "Pat'd Feb 27 1900"
8. band saw "Oietz /Woedermann & Co./Cincinnati O."
9. shopbuilt shaping apparatus with cylindrical cutting head and tilting, sliding table for holding work, heavy wooden base
10. jointer
11. "frizzer" (spinning toothed cylinder) shop built
12. small disk slotting saw, shop built
13. wood stove "Modoc No. 4/Madison Ind"
14. disk table saw with jigs, shop built
15. clothespin turner "Goodspeed Mach. Co. Winchendon, Mass. U.S.A."
16. scale "Mohawk Standard"
17. cast and wrought iron shaping machine, purpose unknown, no label

Machine Shop, West Side

18. power feed rip saw "The Sinker Oav Co./Indianapolis, Ind."
19. planer "J.A. Fay & Egan Co./ Cincinnati Ohio"
20. clothespin polishing drum
21. table shaping device, recently shop built (similar to No. 8 and possibly No. 16)
22. clothes pin slitting machine "Goodspeed Mach. Co/Winchendon Mass"
23. disk sander
24. centrifugal fan "Indiana Fan Co."
25. cast iron drill press
26. two pattern copying machines
27. suspenced disk saw "Louis E. Rechtin & Bro. Cin'ti O."
28. blower for sawdust collection system "Bayley Mf. Co. Milwaulkee Wisconsin"
29. saw sharpener "Black Oiamond Saw and Machine W'ks/Natic Mass."
30. drill press "Champion Blower and Forge Co. Lancaster Pa No. 25"
31. table shaper, shop built
32. table saw "The Egan Company/Cincinnati Ohio USA" adjustable table height
33. sander, shop built

Sawmill Room

34. saw table "Reeves & Company Columbus Ind" (obtained by the Schroeders second hand in the 1930's)
35. Marine "doctor" steam engine, double expansion, twin cylinder, reversing gear, no makers plate
36. winch
37. centrifugal fan "Indiana Fan Company Columbus Ind"
38. diesel engine, maker's plate missing
39. sharpening stone in cast iron stand

Engine Room

40. diesel engine " 'Primm' Oil Engine/Power Manufacturing Company/ Marion Ohio," 35 hp, etc..., pats. 1910, 1914, 1919, "other patents pending"
41. horizontal stationary steam engine, no maker's plate, governor: "Gardner Governor Company of Quincy Illinois/No 2"
42. horizontal stationary steam engine, no maker's plate, governor: "Pickering/Portland Conn USA"
43. steam engine cylinder

Second Floor of Woodworking Shop, South End

44. large heavy duty sewing machine, unlabeled [for stitching pig-skin covers onto the saddle trees (?)]
45. small shop built steam engine, toy
46. small steam engine, governor: "The Pickering"
47. small shop built steam engine
48. lathe with wooden base, scorched (from fire during World War I)

Second Floor of Woodworking Shop, North End

49. small steam engine
50. ball governor
51. spring ball governor "Gardner Gov. Co. Quincy Ill. 1 1/2"
52. remains of large wooden-based shaper similar to one downstairs (No 8)
53. stove "New Process/for Fireless Burner/The Standard Lighting Co. Clev'd Ohio"

Gluing Shop

54. 3 iron vises
55. shop built glue heater heated by steam
56. free standing vise for holding Western saddles (not very old)
57. free standing vise for holding Eastern saddles
58. wood stove "O.K. Stove & Range Co. Louisville, Ky./28"
59. stone disk grinder, shop built
60. spinning burr on shaft, shop built

Blacksmith Shop

61. power hammer "Built by Pettingell Machine Co., Amesbury Mass."
62. brick forge
63. centrifugal blower "Champion Blower & Forge Co./Lancaster Pa./ USA," latest patent date 1912
64. new blower
65. fixed drill chuck
66. wood stove "Joliet/Stove/Works/Joliet/Ill./Patented/June 13, 1895/ Other Patents/Pending."
67. shear
68. drill press "Canedy-Otto/Mfg/Co./Chicago Heights Ill.," "No 10 1 1/2"
69. centrifugal blower "The Buffalo Forge Co. Pat. July 2 '77 Buffalo, N.Y."
70. shear "Badger No 3/Mfd by; the Rock River Mach. Co. Janesville Wis. U.S.A."
71. 1 anvil
72. large punch
73. 1 small anvil
74. 2 iron vises
75. 1 wooden vise
76. small punch "Whitney metal Tool Company Rockford Ill U.S.A." "Punch No. 16 A 25 Capacity 3/8 thru 1/4"

Second Floor GluingShop

77. desk
78. unfolded cartons for clothespins
79. brushes for gluing

Notes

1 Edmondson Bros' Madison Directory 1875. Table of "Saddle Tree Manufacturers." Cincinnati, Ohio, 1875, p. 104.
2 Deed Record Book, no. 41, p. 297. At Madison Court House.
3 William Wesley Woolen, Biographical and Historical Sketches of Early Indiana, Indianapolis, 1883, p. 537.
4 Woolen, pp. 513, 536, 537.
5 Alonzo S. Chapman, Madison: A Jewel in Setting 'Neath the Hills. Madison, Wisconsin, 1922. In his book, Chapman describes a German harnessmaker in Madison as standing "at the head of the large German element in our city, who were looked on as Madison's solid citizens."
6 Ibid.
7 From an interview with Charles F. Requet and Mr. C. Schnobel. Requet, who did carpentry work for the Schroeders, claimed that he knew them better and longer than anyone in Madison. First working for them in the 1930's, he built the sawmill and raised the roof on the machine working shop. Schnobel's family had been saddle tree makers in Madison.
8 Story and quote from Requet interview.
9 See Order Record Books at Madison Bank and Trust Co.
10 Ibid.
11 Ibid. Although the records begin in the 1870's, 1890 is the first year that can be used with certainty for compiling data.
12 Ibid.
13 Manufacturers of the United States, 1888, New York, 1888.*
14 Blocks of wood in these various stages were found next to the respective machines.
15 They were covered with garbage and not near a power source.
16 No unfinished rear forks were found.
17 See Nos. 8, 16, and 20 in the invnetory.
18 These have been removed and placed in the house. They had been located in the gluing room.
19 Leonard K. Mason, Pipe Dreams about Leather and Saddles (Walsall, England: 1950) pp. 38-48. His discussion would be ideal except that he is primarily concerned with the English example. Requet interview. No. 4 Catalogue of Ben Schroeder Saddle Tree Co. No. 4 Catalogue of Ben Schroeder Saddle Tree Co. [Madison(?) 1931(?)].
20 Requet interview.
21 Mason, Pipe Dreams, p. 47. He makes roughly the same observation for English saddle tree makers.
22 Schnobel interview. He indicated that this would not have been done at his father's shop.
23 Requet interview; numbers 14 and 21 on the inventory.
24 See number 47 on the inventory.
25 Requet interview. He built both of them.
26 C.J. Walton and Son to Ben Schroeder Saddle Tree Co., 26 September 1924 at Madison Bank and Trust Co.

* As an indication of how inaccurate the index may be, the 1887-88 Madison Directory lists 5 manufacturers, whereas the index shows only 2 for Madison.

27 Numbers 3,5,34,40, 41, 44, 45, 46, and 48 on the inventory.
28 Requet interview. Claiming that the engine was second-hand, Requet made the concrete pad on which it now rests.
29 Woollen, pp. 513, 536, 537.

Bibliographical Essay

Secondary sources revealed little information concerning Madison, the Schroeders, or saddle trees. Helpful secondary sources on Madison were a publicity pamphlet by Alonzo S. Chapman, Madison: A Jewel in Setting 'Neath the Hills (Madison, 1922) and a chapter titled "Madison from 1844 to 1852" in William Wesley Woollen's Biographical and Historical Sketches of Early Indiana (Indianapolis, 1883). For more basic information, there are many nineteenth and twentieth century directories, in addition to the records in the Jefferson County Court House in Madison.

The surviving manuscript materials from the Ben Schroeder Saddle Tree Company are divided between the Madison Bank and Trust Company and Historic Madison Incorporated. The Madison Bank and Trust Company houses the Order Record Books, which can be used to estimate the annual production of the factory. They also have a small quantity of correspondence relating to the boiler and the "Primm" engine. Historic Madison Incorporated has some bills of lading and shipping, starting in 1879, as well as several bundles of correspondence from the 1920's. These bundles, each containing the letters from one year, are all that remains of what must have been a voluminous company correspondence.

There is little information concerning the saddle tree itself. The best history of saddles, in general, is Glen R. Vernam's Man on Horseback [Lincoln, Nebraska: 1972 (1964)]. The best information on the hows and whys of the saddle tree is in Leonard K. Mason's Pipe Dreams about Leather and Saddles (Walsall, England: 1950), but his informal discussion refers only to England.

Addendum To:
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